Defense Information Systems Agency

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Storage Directions

August 2011

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Agenda

- **Computing Services Standard Storage Solutions**
- **Strategic Directions**

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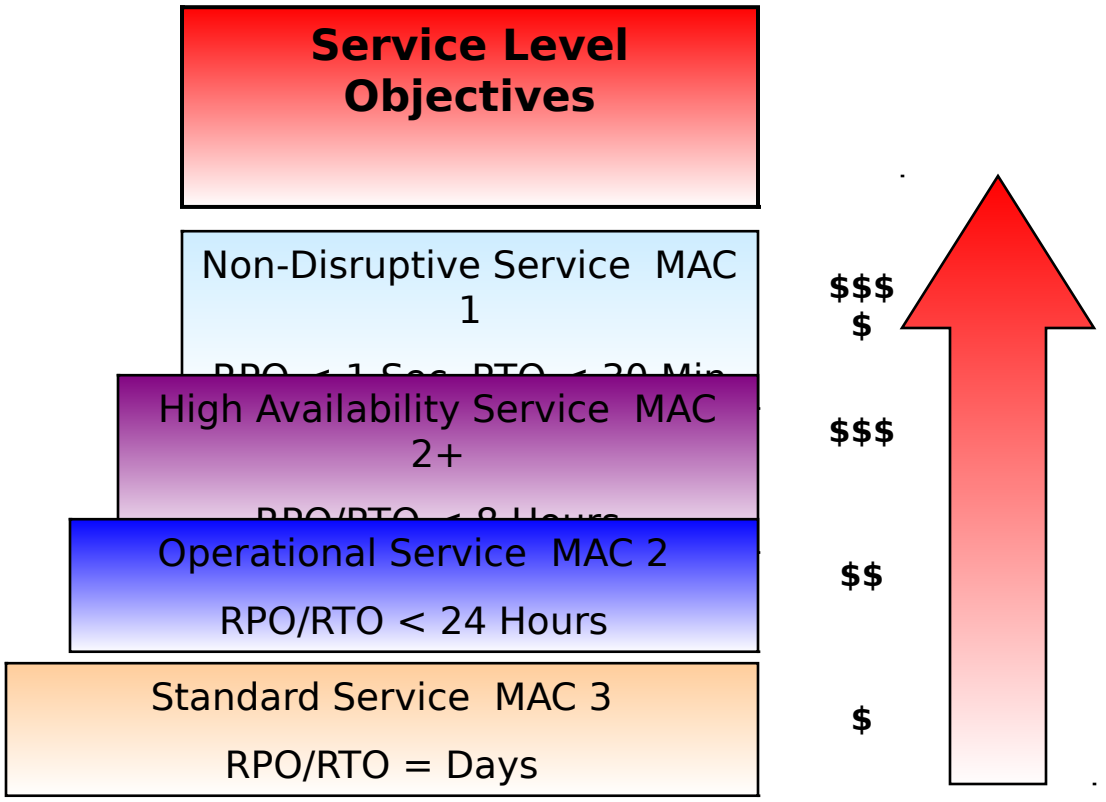
Standard Solutions

Recovery Technologies	
Local	**Remote**
Synchronous Replication	**Asynchronous Replication**
D2D Backup Strategy	**Asynchronous Replication**
Tape or D2D Backup Strategy	**Tape or Remote Asynchronous Replication**
Tape Backup Strategy	**Tape Backup Strategy**



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Standard Storage Components

- **Hardware and Software**
  - **Disk Arrays**
    - **Enterprise Class - Hitachi USPV / VSP**
    - **Mid-tier - Hitachi AMS 2500 (FC)**
    - **Bulk - Hitachi AMS 2500 (SATA)**
    - **NAS - NetApp FAS**
  - **Storage Networking – Brocade**
  - **Data Protection**
    - **Hardware – Oracle/Sun, Data Domain**
    - **Software – Symantec NetBackup, CommVault**
  - **Storage Resource Management - Symantec**

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Current Initiatives

- **IBM Mainframe Silo Tech Refresh**
  - **Replace Physical Tape Silos with Virtual Tape Solution**
  - **Improve Data Protection Service with Replication of Tape Data**
- **Data Protection/Recovery Options for Virtualized Server Environment**
- **Enterprise Service Offerings**
  - **Enterprise Exchange**
  - **Enterprise Share Point**
  - **Records Management**

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"Game Changing" Technologies

- **Virtualization**
  - **Separates physical disk capacity from logical disk capacity**
  - **Faster provisioning**
  - **Keeps costs down by minimizing the amount of physical disk required**
- **Data Deduplication**
  - **Cost saver by reducing the capacity needed for data protection backups**
  - **Improves COOP/DR posture**
- **Tier Storage**
  - **Ability to place data on optimum media via automation based on utilization profile**

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Strategic Directions

- **Enterprise Storage Solutions**
  - **Current Supplier Contract Status**
  - **New Supplier Contract Status**
    - **Meeting with Potential Prime Vendors**
    - **Preparing RFP Documentation**
    - **Plan Release Summer 2012**
  - **Contract Model**
    - **5 year Base Period in which services are ordered**
    - **3 Option Years in which migration activities between contracts is executed**
    - **Vendor migration strategy a key element**

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Technology Focus

- **Bulk Storage Solutions**
  - **High Capacity, Low Cost/TB, Unstructured and Semi-structured Data**
- **Cloud Enabling Solutions**
- **Integrated Automated Solutions**
  - **Provisioning, Day-2-Day Mgmt, Data Protection, Accounting, Performance Mgmt, etc**
- **Non-Disruptive Migration Solutions**
- **Solutions for Virtualized Environments**
- **Application Targeted Solutions**
- **Automated Storage Tiering**

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Backup Slides

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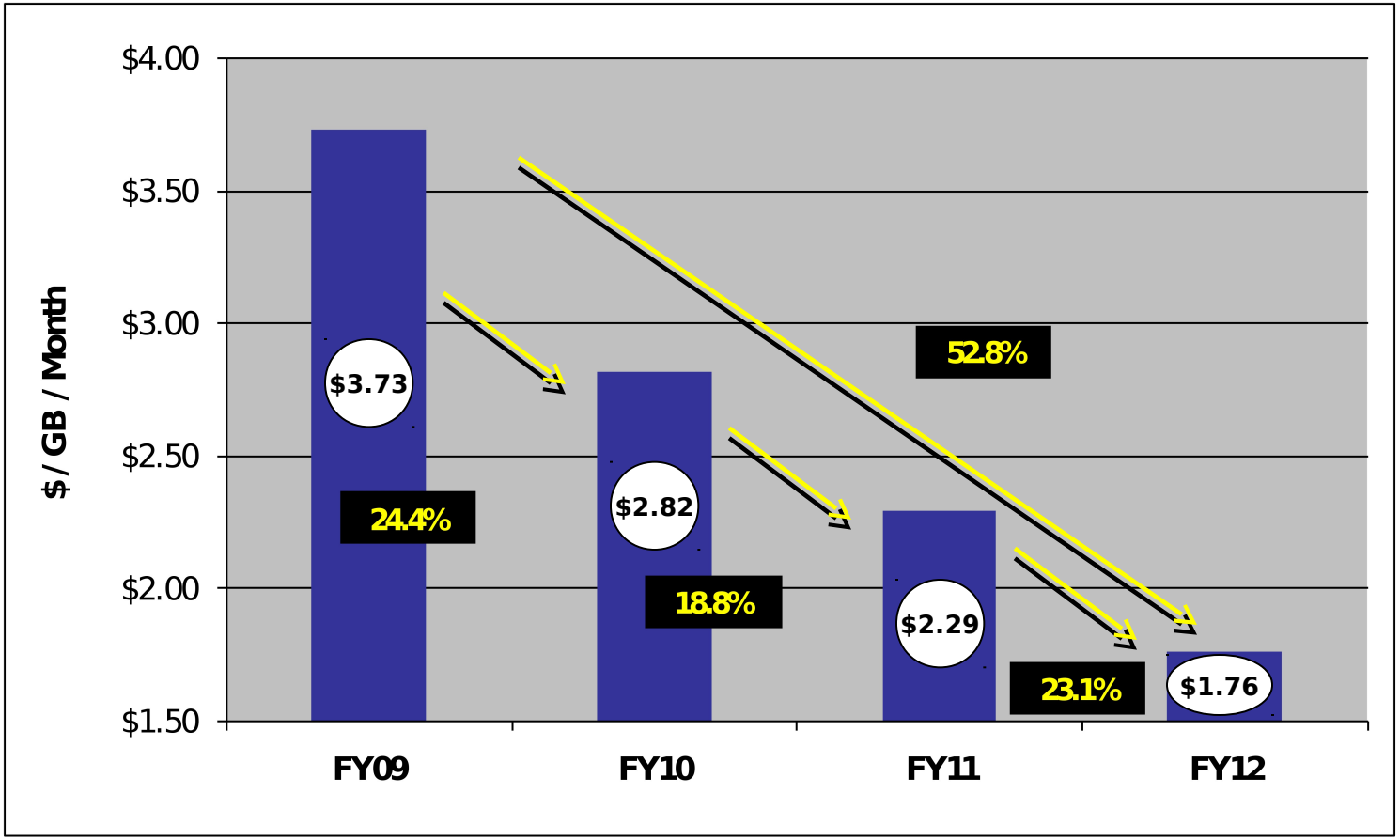
Trend of Basic Storage Rate



Notes:

1) DISA rate includes all Basic Storage services & is fully burdened

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Everything in the Rates

- **Storage Related Services**
  - Hardware
    - Depreciation
    - Maintenance
    - Infrastructure costs – FC & IP switches, backup media, etc.
    - Racks, cables, etc
    - Capacity service based contracts
  - Software
    - SOE Products & other storage resource products
    - Hardware-specific related products
  - Labor
    - Storage Administration
    - OST support
  - Back-up Services
    - Standard weekly backups (1 copy onsite, 1 copy offsite, retain 5 weeks)
    - Incremental daily backups (retain 2 weeks on site)
- **Data Center Services**
  - Security
    - Info Assurance / STIG
    - "Behind The Gate" Facilities
    - Military Police
    - Regulatory Compliance
      - SAS 70
      - DoD IG
      - NSA
  - Facility Measures
    - Conditioned / Redundant Power Feeds
    - A/C
    - Floor Space
  - Networks
    - Circuits
    - Secure, Reliable & Monitored Network
    - 24x7x365 Support
  - Service Level Agreements
  - Planned Tech Refresh
  - Help Desk
    - Customer Service Agents
    - Engineers On-call
  - Culture
    - We Are Part of The DoD Family
      - Are Here to Support Customers
      - Not Profit Oriented